

REMARKS

Applicant amended claims 1-3 and 5-22 and added new claims 23-88 to further define Applicant's claimed invention. The amendment to claim 1 is supported by the specification at least on page 3, lines 13-16 and page 11, line 16 to page 12, line 2, and Fig. 7. The amendment to claim 8 is supported by the specification at least on page 12, lines 7-9. New claim 23 is supported by the specification at least on page 19, lines 14-15. New claims 24, 55, and 84 are supported by the specification at least on page 13, lines 4-5. New claims 25-27, 56-58, and 85-87 are supported by the specification at least on page 13, line 21 to page 14, line 4. New claims 28, 59, and 88 are supported by the specification at least on page 14, line 12. New claim 29 is supported by claims 1 and 4 as originally filed and page 16, lines 12-14 of the specification. New claims 30-32 and 61-63 are supported by the specification on page 8, line 6 and Fig. 21. New claims 33 and 64 are supported by the specification at least on page 15, line 9. New claims 34 are supported by the specification on page 20, line 22. New claims 35 and 65 are supported at least by claim 9 as originally filed. New claims 36 and 66 are supported at least by the specification on page 11, line 16 to page 12, line 2. New claims 37-41 and 67-71 are supported at least by claims 2, 3, and 5-7 as originally filed. New claim 42 is supported by the specification at least on page 3, line 15. New claims 43-47 and 72-76 are supported at least by claims 10-14 as originally filed. New claims 48, 49, 77, and 78 are supported at least by claims 15 and 16 as originally filed and page 20, lines 4-11 of the specification. New claims 50 and 79 are supported at least by claim 17 as originally filed. New claims 51 and 80 are supported by the specification at least on page 13, line 13. New claims 52, 53, 81, and 82 are supported by the specification at least on page 5, line 2. New claims 54 and 83 are supported by the specification at least on page 13, line 7. New claim 60 is supported at least by claims 1 and 4 as originally filed and page 5, line 20 of the specification. No new matter has been added.

In the Office Action, the Examiner objected to the specification and requested that the application numbers provided on page 20 of the specification be updated to reflect a patent number if applicable. Applicant amended page 20 to include the corresponding patent number for application number 09/263,266. Applicant also

corrected a minor informality in the application number listed on page 20, line 16, which is still pending.

The Examiner rejected claim 17 under 35 U.S.C. §112, first paragraph as failing to comply with the enablement requirement, or alternatively, the written description requirement. Applicant submits that chemical substances to inhibit scar formation are well known in the art. Applicant submits that one of ordinary skill in the art would be familiar with chemicals that inhibit scar formation without a detailed explanation or examples in the specification. Applicant is submitting in an Information Disclosure Statement concurrently filed herewith, U.S. Patent No. 6,410,519 to Gruskin et al. Gruskin et al. teach an example of a chemical substance that inhibits scar formation. It is submitted that Applicant's specification would enable one skilled in the art to understand the concept of combining an implant with a chemical substance to inhibit scar formation in the context of the invention without further details or examples in the specification. Accordingly, Applicant submits that the subject matter of claim 17 is enabled and is adequately described.

The Examiner rejected claims 19-22 under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter that the Applicant regards as the invention. Applicant amended the preamble of independent claim 1 to recite the claimed invention as being "a system." Applicant submits that the preamble of claim 1, as now amended, is sufficient to encompass the subject matter recited in claims 19-22 as part of the system.

The Examiner rejected claims 1-3, 5-13, 18, 19, and 22 under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent No. 6,277,149 to Boyle et al. or, in the alternative, under 35 U.S.C. § 103(a) as being obvious over Boyle et al. in view of U.S. Patent No. 6,294,187 to Boyce et al.

Independent claim 1, as now amended, recites a system including a spinal implant having upper and lower surfaces that are "arcuate in a direction from one of said opposite sides to another of said opposite sides" and has "an opening passing through said upper and lower surfaces for permitting for the growth of bone from adjacent vertebral body to adjacent vertebral body through said implant." Claim 1 further recites that "a plurality of forward-facing projections" extend from the upper and lower surfaces

for engaging the adjacent vertebral bodies, "at least one of said projections having a leading face and a rearward portion, said leading face and said rearward portion each having a length and a slope, the length of said leading face being longer than the length of said rearward portion, the slope of said rearward portion being steeper than the slope of said leading face."

Boyle et al. teach an implant that has upper and lower surfaces 522, 524 that are convex in a direction from front to back. (See Boyle et al., col. 6, lines 5-6 and Fig. 16). Boyle et al. do not teach or suggest an implant having upper and lower surfaces that are arcuate from side to side as recited in independent claim 1.

Boyce et al. teach a threaded cylinder 70. (See Boyce et al., col. 14, line 55 and col. 15, lines 2-5; and Figs. 1d and 2b). Boyce et al. do not teach or suggest a spinal implant having an opening passing through the upper and lower surfaces that permits bone growth from adjacent vertebral body to adjacent vertebral body through the implant as recited in independent claim 1. Nor does Boyce et al. teach or suggest an implant with a plurality of forward facing projections as recited in independent claim 1. The implant taught by Boyce et al. has threads and is screwed into an intervertebral site. (Boyce et al., col. 15, lines 2-5 and Fig. 2b). Neither Boyle et al. nor Boyce et al., whether alone or in proper combination, teach or suggest an implant as recited in Applicant's claimed invention.

The Examiner also rejected claims 14-16 under 35 U.S.C. § 103(a) as being unpatentable over Boyle et al. and Boyce et al. in view of U.S. Patent No. 5,860,973 to Michelson; rejected claim 17 under 35 U.S.C. § 103(a) as being unpatentable over Boyle et al. and Boyce et al. in view of U.S. Patent No. 5,899,939 to Boyce et al.; and rejected claims 20 and 21 under 35 U.S.C. § 103(a) as being unpatentable over Boyle et al. and Boyce et al. in view of U.S. Patent No. 5,484,437 to Michelson. Applicant submits that the rejections over claims 14-17, 20, and 21 have been overcome at least because they depend from an allowable independent claim, or claims dependent therefrom.

Accordingly, Applicant submits that independent claim 1 is allowable over the cited art and that dependent claims 2, 3, and 5-28 dependent from independent claim 1,

or claims dependent therefrom are allowable at least due to their dependency from an allowable independent claim.

New independent claim 29 recites a system including a spinal implant having "a maximum width that is less than a maximum height." Neither Boyle et al. nor Boyce et al., whether alone or in proper combination, teach or suggest Applicant's invention as claimed in independent claim 29. Applicant submits that new claims 30-59 are allowable because they depend from an allowable independent claim, or claims dependent therefrom.

New independent claim 60 recites a system including a spinal implant having opposite sides that are "at least in part smooth along a substantial portion of the length of said opposite sides, said upper and lower surfaces being at least in part arcuate from one of said opposite sides to the another of said opposite sides." Neither Boyle et al. nor Boyce et al., whether alone or in proper combination, teach or suggest Applicant's invention as claimed in independent claim 60. Applicant submits that new claims 61-88 are allowable because they depend from an allowable independent claim, or claims dependent therefrom.

In view of the foregoing remarks, it is respectfully submitted that the claims, as amended, are patentable. Therefore, it is requested that the Examiner reconsider the outstanding rejections in view of the preceding comments. Issuance of a timely Notice of Allowance of the claims is earnestly solicited.

To the extent any extension of time under 37 C.F.R. § 1.136 is required to obtain entry of this reply, such extension is hereby respectfully requested. If there are any fees due under 37 C.F.R. §§ 1.16 or 1.17 which are not enclosed herewith, including any fees required for an extension of time under 37 C.F.R. § 1.136, please charge such fees to our Deposit Account No. 50-1066.

Respectfully submitted,

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